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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Emmanuel Legrand

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ALSTON & BIRD LLP

BANK OF AMERICA PLAZA

101 SOUTH TRYON STREET, SUITE 4000

CHARLOTTE, NC 28280-4000

EXAMINER

ALIE, GHASSEM

ART UNIT

PAPER NUMBER

3724

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/543,026	<b>Applicant(s)</b> LEGRAND, EMMANUEL	
	<b>Examiner</b> GHASSEM ALIE	<b>Art Unit</b> 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 24-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/26/09</u> .  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Objections***

1. Claims 25-29 are objected to because of the following informalities: the status identifier of claims 25-29 should be --Currently Amended, Withdrawn--; instead of "Currently amended." It should be noted that claims 25-29 have been previously withdrawn. However, in view of amendment to the claims including change of the dependency of the claims, claims 25-29 are examined with the new claim 30. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 29 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claim 29, the original disclosure does not teach "the height of the curved bearing zone is equal to the height of the string passageway."

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Moore et al. (6,401,344), hereinafter Moore. Regarding claim 1, Moore teaches a cutting head 100 including a passageway 110 for a cutting string 39 extending along an axis between a first opening 111 and a second opening 112; and at least one curved bearing zone 122, 124 extending between second opening 112 of the passageway and a peripheral region of the head, wherein the peripheral region of the head is located opposite the first opening with respect to the second opening along the axis defined by the passage way. It should be noted that the passageway also is capable of holding a string having a non-circular cross-section such as a string having a non-circular cross-section in Jones et al. (5,048,278) or Morabit et al. (5,761,816). The profile of the curved bearing zone also suits a non-circular cross-section in Jones. Claim does not call for a combination of a string and cutting head. The cutting head in Moore should only be capable of receiving a cutting string with a non-circular cross-section. In other words, the cutting string is not positively recited in the claims. Moore also teaches that a surface of the curved bearing zone presents a recessed profile which is suited to the cross-section of the cutting string 39, in order to guide the cutting string in the recess when the string flexes in a direction opposite to the rotation of the head to rest against the curved bearing zone. See Fig. 11 in Moore.

6. Claims 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Rouse (4,756,146). Regarding claim 1, Rouse teaches a cutting head 10 including a passageway 14 for a cutting string 2 extending along an axis between a first opening and a second opening; and at least one curved bearing zone 101 extending between a string outlet region or the second opening 100 of the passageway and a peripheral region 102 of the head, wherein the

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peripheral region 102 of the head is located opposite the first opening with respect to the second opening along the axis defined by the passage way. It should be noted that the string outlet region could be defined by the mid-section of the passage, and the curved bearing region could be considered as the region between the string outlet region to the periphery region of the head as show in Fig. 1 below. It should also be noted that the at least portion of the string, e.g. the bottom portion of the string in the passageway, is extended along an axis which is off set from the rotational axis 9 of the cutting head. The passage extends along an axis that is defined by multi axes connected together along the passageway. It should be noted that the peripheral region of the head adjacent to the first opening is located opposite the peripheral region adjacent the second opening, since the two peripheral regions are at least laterally spaced from each other. It should also be noted that the passageway also is capable of holding or supporting a string having a non-circular cross-section such as a string having a non-circular cross-section in Jones et al. (5,048,278). The profile of the curved bearing zone also suits a non-circular cross-section in Jones. Claim does not call for a combination of a string and cutting head. The cutting head in Rouse should only be capable of receiving a cutting string with a non-circular cross-section. In other words, the cutting string is not positively recited in the claims. Rouse also teaches that a surface of the curved bearing zone presents a recessed profile 46 which is suited to the cross-section of the cutting string 2, in order to guide the cutting string in the recess when the string flexes in a direction opposite to the rotation of the head to rest against the curved bearing zone.

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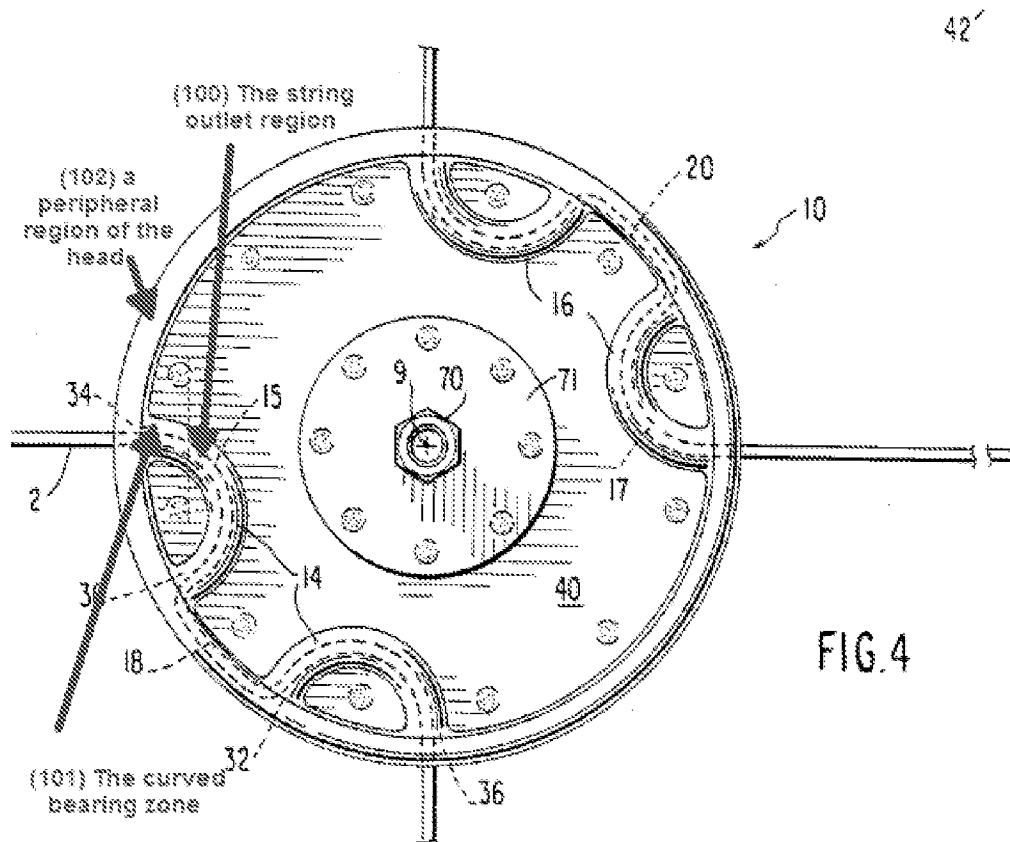


FIG. 4

7. Claims 24-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Jones et al. (5,048,278), hereinafter Jones. Regarding claim 1, Jones teaches a cutting head 1"R" including a passageway 12 for a cutting string 10 extending along an axis between a first opening and a second opening; and at least one curved bearing zone 55 extending between a string outlet region 52, 54 or the second opening of the passageway 12 and a peripheral region 24 of the head, wherein the peripheral region of the head is located opposite the first opening with respect to the second opening along the axis defined by the passageway. It

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should also be noted that the bearing zone 55 is located between an outlet or a second opening 52, 55 of the passageway 12 and the peripheral region of the rim 6. It should be noted that the passageway extends along an axis which is defined by multiple axes or three axes connected together to form an axis. The claim does not call for a single longitudinal axis. In addition, the peripheral region adjacent to the first opening is located opposite the peripheral region adjacent the second opening, since the two peripheral regions are at least laterally spaced from each other. Jones also teaches that a surface of the curved bearing zone presents a recessed profile which is suited to the cross-section of the cutting string 10, in order to guide the cutting string in the recess when the string flexes in a direction opposite to the rotation of the head to rest against the curved bearing zone. See Figs. 5-8 and col. 3, lines 31-58 and col. 4, lines 1-62 in Jones. It should be noted that the convex curve surface of the bearing zone create a recessed profile that is suited for supporting the cutting string when unsupported portion 68, 70 of the cutting string 10 bents backwardly against the surface of the bearing zone 55. See Fig. 6 in Jones.

Regarding claim 25, Jones teaches everything noted above including that the recessed profile of the curved bearing zone is in the generally form of a V. It should be noted that the cross-section of the passageway and the recessed profile of the curved bearing zone is also capable of holding or supporting a string with a generally square cross-section that is held obliquely relative to feed the recessed profile of the curved bearing zone. It should be also be noted that the cutting string has not being positively claimed.

Regarding claim 26, Jones teaches everything noted above including that the second opening is spaced farther inwardly from the peripheral region that first opening is spaced

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from a respective peripheral region. It should be noted that the first opening could be considered by an opening of the passageway that is closer to its respective peripheral region than the second opening to its respective peripheral region.

Regarding claim 27, Jones teaches everything noted above including that the axis of the passageway is inclined relative to a direction perpendicular to the peripheral region of the head.

Regarding claim 28, Jones teaches everything noted above including that the string passageway presents a recessed profile to the profile of the curved bearing zone.

Regarding claim 29, as best understood, Jones teaches everything noted above including that the height of the curved bearing zone appears to be equal to the height of the string passageway.

Regarding claim 30, Jones teaches everything noted above including that the second opening presents a substantially square cross-sectioned obliquely and wherein the recessed profile of the curved bearing zone is identical to the profile of the second opening. It should be noted that the cross-section of the second opening which is adjacent to the curve bearing zone is square, as shown in Fig. 6. The cross-section of the second opening is identical to the profile of the curved bearing zone. In addition, the square cross-section is positioned obliquely relative to the axis of rotation of the cutting head. It should be noted that the claim does not recite with respect to what part of the cutting head the cross-sectioned of the second opening is oblique.

#### ***Response to Amendment***

8. Applicant's arguments with respect to claims 24-30 have been considered but are



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moot in view of the new ground(s) of rejection.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ghassem Alie whose telephone number is (571) 272-4501.

The examiner can normally be reached on Mon-Fri 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, SEE <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ghassem Alie/

Primary Examiner, Art Unit 3724

July 13, 2009